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NFPA 501A

Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities

2003 Edition

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NFPA 501A

Standard for

Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities

2003 Edition

This edition of NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities*, was prepared by the Technical Committees on Manufactured Housing, released by the Technical Correlating Committee on Manufactured Housing, and acted on by NFPA at its November Association Technical Meeting held November 16–20, 2002, in Atlanta, GA. It was issued by the Standards Council on January 17, 2003, with an effective date of February 6, 2003, and supersedes all previous editions.

This edition of NFPA 501A was approved as an American National Standard on January 17, 2003.

Origin and Development of NFPA 501A

NFPA activity associated with manufactured homes commenced in 1937 when NFPA organized its first Committee on Trailers and Trailer Courts. The first standard covering trailer coach camps appeared in 1939, with revisions in 1940, 1952, 1960, and 1964. A completely new edition was adopted in 1971, and this text was revised in 1972, 1973, 1974, 1975, 1977, and 1982.

The American National Standards Institute (ANSI) approved the 1972 NFPA edition on May 8, 1973; the 1973 NFPA edition on December 28, 1973; the 1974 NFPA edition on January 30, 1975; the 1975 NFPA edition on February 27, 1976; and the 1977 NFPA edition on October 18, 1977.

The 1982 edition of *Standard for Firesafety Criteria for Mobile Home Installations, Sites, and Communities* superseded the 1977 edition and was adopted by NFPA at its Annual Meeting held in San Francisco on May 19, 1982.

The 1982 edition was produced by the newly formed Committee for Firesafety for Mobile Homes (June 10, 1979), which was charged with the responsibility of developing documents for fire safety criteria for single-family mobile homes, including the installation, sites, and communities, and the maintenance of and improvements for existing mobile homes. Therefore, that edition excluded all sections of previous editions not considered within the committee scope. Notably excluded were stabilizing and anchoring systems, requirements for piers and footings, and plumbing, including sewage disposal systems. Requirements for park electrical systems were addressed by reference to NFPA 70, *National Electrical Code*®.

Modifications were also made in sections dealing with fuel supply, air conditioning, and life and fire safety.

Major revisions to the standard were made in the 1987 edition in an attempt to better coordinate the NFPA chapters in a joint publication with NCSBCS, ANSI A225.1/NFPA 501A. Major changes included substituting “manufactured home” for “mobile home” throughout; deleting Chapter 3, “Air Conditioning”; expanding Chapter 2, “Fuel Supply”; and combining three appendixes into two.

The standard was reconfirmed in 1992 with a plan to expand the scope of NFPA 501A to cover fire safety requirements for the design, construction, installation, alteration/rehabilitation, maintenance, use, and occupancy of manufactured homes, manufactured home sites, and manufactured home communities, including accessory buildings and structures. This was a major revision of the scope and the entire standard, and the committee targeted a complete revision of 501A for 1994.

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The 1997 edition was a reconfirmation of the 1992 edition of NFPA 501A. The proposed expansion of the scope of the 1992 edition, as noted in the previous paragraph, was discussed and acted on by the technical committee. The scope of the NFPA 501A document was not expanded but instead a new document was generated. This document, NFPA 501, *Standard on Manufactured Housing*, represents the reconstituted 1977 edition of *Standard for Mobile Homes*. This original document was the basis for the federal *Manufactured Home Construction and Safety Standards*.

The earlier editions of NFPA 501A were jointly developed and published by NFPA and NCSBCS as the A225.1/NFPA 501A document. The 1997 edition of NFPA 501A was published as a separate, stand-alone document in agreement with NCSBCS and contained only the fire safety requirements. The non–fire safety requirements were published by NCSBCS as A225.1 (1994 edition).

At present, NFPA has taken over responsibility for the NCSBCS A225 Standard. It was processed concurrently with this edition of NFPA 501A.

The 1999 edition was a reconfirmation of the earlier document. In June 1998, NFPA was selected by the U.S. Department of Housing and Urban Development to update the federal standards (24 CFR 3280) for manufactured homes. As a result of this selection by HUD, the original technical committee for manufactured homes was expanded into six technical committees and a technical correlating committee. This expansion occurred during the Report on Comments phase of the 1999 edition.

The 2000 edition had only a few minor revisions. One revision, in 4.3.5, pertained to updating the water supplies for fire department operations. The other revisions were editorial in nature.

The 2003 edition has been reformatted to meet the *NFPA Manual of Style* requirements, which are editorial and format related. Several definitions were deleted during this revision cycle.

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Michael L. Zieman, RADCO, CA [RT]
Chair, MAN-MEC

Walter P. Sterling, NFPA Staff Liaison

Committee Scope: This Correlating Committee shall have primary responsibility for documents or portions of documents that provide a safe and healthy environment for the occupant of a manufactured home.

FAIR USE

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Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on administrative provisions and planning requirements for manufactured homes to assure the adequacy of architectural planning considerations and documentation of compliance for a safe and healthy environment for the occupants of a manufactured home.

Technical Committee on Electrical for Manufactured Housing (MAN-ELE)

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Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on electrical conductors and electrical equipment installed within or on manufactured homes to provide a safe and healthy environment for the occupants of a manufactured home.

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(Alt. to J. Pabian)

Walter P. Sterling, NFPA Staff Liaison

Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on fire safety to the occupants of a manufactured home.

FAIR USE

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Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on condensation control; air infiltration; thermal insulation; certification for heating and comfort cooling; and heating, cooling, and fuel-burning equipment that is installed within, on, or external to a manufactured home.

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Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on plumbing systems that provide a safe and healthy environment for the occupants of a manufactured home.

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Bonnie E. Manley, NFPA Staff Liaison

Committee Scope: This Committee shall have primary responsibility for documents or portions of documents on materials, products, equipment and workmanship and testing needed to ensure that there is a safe and healthy environment for the occupant of a manufactured home. The Committee shall also have the responsibility associated with the general requirements for designing the structure to fully withstand the adverse effects of transportation shock and vibration on a manufactured home.

These lists represent the membership at the time the Committees were balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

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NFPA 501A

Standard for

Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities

2003 Edition

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Information on referenced publications can be found in Chapter 2 and Annex D.

Chapter 1 Administration

1.1 Scope. This standard shall cover fire safety requirements for the installation of manufactured homes and manufactured home sites, including accessory buildings, structures, and communities.

1.2 Purpose. The purpose of this standard is to provide minimum requirements for the installation of manufactured homes and manufactured home sites, including accessory buildings, structures, and communities.

1.3 Application.

1.3.1 The standard shall apply to new installations and where it is deemed a requirement by the regulatory agencies for existing installations.

1.3.2 The provisions of this standard shall not apply to recreational vehicles as defined in NFPA 1192, *Standard on Recreational Vehicles*, or to park trailers as defined in RVIA/ANSI A119.5, *Standard for Park Trailers*.

1.4 Units and Formulas.

1.4.1 SI Units. Metric units of measurement in this document are in accordance with the modernized metric system known as the International System of Units (SI).

1.4.2 Primary Values. The SI value for a measurement, and the inch-pound value given in parentheses, shall be acceptable for use as primary units for satisfying the requirements of this document.

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Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2002 edition.
NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances,* 2002 edition.
NFPA 31, *Standard for the Installation of Oil-Burning Equipment,* 2001 edition.
NFPA 54, *National Fuel Gas Code,* 2002 edition.
NFPA 58, *Liquefied Petroleum Gas Code,* 2001 edition.
NFPA 70, *National Electrical Code®,* 2002 edition.
NFPA 72®, National Fire Alarm Code®, 2002 edition.
NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment,* 1999 edition.
NFPA *101®, Life Safety Code®,* 2003 edition.
NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting,* 2001 edition.
NFPA 1192, *Standard on Recreational Vehicles,* 2002 edition.
NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems,* 2002 edition.

2.3 Other Publications.

2.3.1 ASME Publication. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

ASME *Boiler and Pressure Vessel Code*, 2001.

2.3.2 ASTM Publications. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM A 254, *Standard Specification for Copper Brazed Steel Tubing*, 2002.

ASTM A 539, *Standard Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines*, 1999.

ASTM B 88, *Specification for Seamless Copper Water Tube*, 1999.

ASTM B 280, *Specification for Seamless Copper Tubing for Air Conditioning and Refrigeration Field Service*, 1999.

ASTM D 2513, *Thermoplastic Gas Pressure Pipe, Tubing, and Fittings*, 2001.

ASTM D 2517, *Reinforced Epoxy Resin Gas Pressure Pipe and Fittings*, 2000.

2.3.3 ISO Publication. Insurance Services Office, Inc., Customer Service, 545 Washington Blvd., Jersey City, NJ 07310-1686.

Fire Suppression Rating Schedule, Table 340, "Calculation of Needed Fire Flow," 6th edition, 1988.

2.3.4 RVIA Publication. Recreation Vehicle Industry Association, 1896 Preston White Drive, P.O. Box 2999, Reston, VA 02209-2999.

RVIA/ANSI A119.5, *Standard for Park Trailers*, 1998.

2.3.5 UL Publication. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.

UL 80, *Steel Inside Tank for Oil Burner Fuel*, 1996.

2.3.6 U.S. Government Publication. U.S. Government Printing Office, Washington, DC 20402.

Title 49, *Code of Federal Regulations*, Parts 191 and 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards."

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not included, common usage of the terms shall apply. Words used in the present tense shall include the future; words used in the masculine gender shall include the feminine and neuter; the singular number shall include the plural, and the plural number shall include the singular. Where terms are not defined in this chapter or within an occupancy chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Webster's Third New International Dictionary of the English Language, Unabridged*, shall be a source for ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.

3.3.1 Awning. A shade structure, supported by posts or columns, or partially supported by a manufactured home, that is installed, erected, or used on a manufactured home site.

3.3.2 Cabana. A portable, demountable, or permanent room enclosure or other building erected or constructed for human occupancy.

3.3.3 Carport. An awning or shade structure for a vehicle or vehicles that is permitted to be either freestanding or partially supported by a manufactured home.

3.3.4 Community Building. Any nonresidential building used for manufactured home community purposes.

3.3.5 Community Management. The person or entity who owns a development or has charge, care, or control of a community (e.g., park, estate, or subdivision).

3.3.6 Community Street. A private way that affords principal means of access to abutting individual sites, homes, and buildings.

3.3.7 Habitable Room. A room or enclosed floor space arranged for living, eating, food preparation, or sleeping purposes that does not include bathrooms, toilet compartments, laundries, pantries, foyers, hallways, and other accessory floor space.

3.3.8 Manufactured Home. A structure, transportable in one or more sections, which, in the traveling mode, is 8 body-ft (2.4 m) or more in width or 40 body-ft (12.2 m) or more in length or, when erected on site, is 320 ft^2 (29.7 m^2) or more and which is built on a permanent chassis and designed to be used as a dwelling, with or without a permanent foundation, when connected to the required utilities, and includes plumbing, heating, air-conditioning, and electrical systems contained therein; except that such terms shall include any structure which meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency. Calculations used to determine the number of square feet in a structure are based on the structure's exterior dimensions, measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows.

3.3.9* Manufactured Home Accessory Building or Structure. A building or structure that is an addition to a manufactured home or that supplements the facilities provided in a manufactured home; it is not a self-contained, separate, habitable building or structure.

3.3.10 Manufactured Home Gas Supply Connector. A listed connector designed for connecting the manufactured home to the gas supply source.

3.3.11 Manufactured Home Site. A parcel of land for the accommodation of one manufactured home, its accessory building or structures, and accessory equipment for the exclusive use of the occupants.

3.3.12 Porch. An outside walking area having a floor that is elevated more than 203 mm (8 in.) above grade.

3.3.13 Ramada. Any freestanding roof or shade structure installed or erected above a manufactured home or any portion thereof.

Chapter 4 Fuel Supply

4.1 Fuel Supply.

4.1.1* General.

4.1.1.1 All fuel gas piping systems serving manufactured homes, accessory buildings, or structures and communities shall be designed and constructed in accordance with any applicable provisions of NFPA 54, *National Fuel Gas Code*, and NFPA 58, *Liquefied Petroleum Gas Code*.

4.1.1.2 NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, shall apply to oil fuel-burning systems and shall conform to the criteria of the authority having jurisdiction.

4.1.2 Gas Supply Connections.

4.1.2.1 Gas supply connections at sites, where provided from an underground gas supply piping system, shall be located and arranged to permit attachment to a manufactured home occupying the site in a worklike manner.

FAIR USE

4.1.2.2 For the installation of liquefied petroleum gas (LP-Gas) storage systems, the provisions of NFPA 58, *Liquefied Petroleum Gas Code*, shall be followed.

4.1.3 Location of Gas Supply Connection. The gas supply to the manufactured home shall be located within 1.22 m (4 ft) of the manufactured home stand.

Exception: The above requirements shall not apply to gas supply connections for manufactured homes located on all-weather wood, concrete, or concrete block foundation systems or on foundations constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code.

4.2 Single and Multiple Manufactured Home Site Fuel Supply Systems.

4.2.1 Gas Piping Installations — Underground Gas Piping. Underground gas piping system installations shall comply with any applicable building code and 4.2.1.1 and 4.2.1.2.

4.2.1.1 Underground gas piping shall not be installed beneath that portion of a manufactured home site reserved for the location of a manufactured home or manufactured home accessory building or structure unless installed in the open-ended gastight conduit of 4.2.1.2.

4.2.1.2 The open-ended gastight conduit shall conform to the requirements in 4.2.1.2(A) through 4.2.1.2(D).

(A) The conduit shall be not less than Schedule 40 pipe that is approved for underground installation beneath buildings.

(B) The interior diameter of the conduit shall be not less than 12.7 mm (0.5 in.) larger than the outside diameter of the gas piping.

(C) The conduit shall extend to a point not less than 102 mm (4 in.) beyond the outside wall of the manufactured home or accessory building or structure, and the outer ends shall not be sealed.

(D) Where the conduit terminates within a manufactured home or accessory building or structure, it shall be accessible and the space between the conduit and the gas piping shall be sealed to prevent leakage of gas into the building.

4.2.2 Manufactured Home Site Gas Shutoff Valve. Gas shutoff valves shall be provided with the following requirements except for manufactured homes located on foundations constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code:

(A) Each manufactured home site shall have a listed gas shutoff valve installed upstream of the manufactured home site gas outlet.

(B) The gas shutoff valve shall be located on the outlet riser at a height of not less than 152 mm (6 in.) above grade.

(C) A gas shutoff valve shall not be located under any manufactured home.

(D) The outlet shall be equipped with a cap or plug to prevent discharge of gas whenever the manufactured home site outlet is not connected to a manufactured home.

4.2.3 Gas Meters.

4.2.3.1 Support of Meters. Where installed, gas meters shall be supported by a post or bracket placed on a firm footing or other means providing equivalent support and shall not depend on the gas outlet riser for support.

4.2.3.2* Location of Meters.

4.2.3.2.1 Each gas meter shall be installed in an accessible location and shall be provided with unions or other fittings so that the motor is removed easily and placed in an upright position.

4.2.3.2.2 Meters shall not be installed in unventilated or inaccessible locations or closer than 0.91 m (3 ft) to sources of ignition.

4.2.4 Meter Shutoff Valve or Cock.

4.2.4.1 All gas meter installations shall be provided with shutoff valves or cocks located adjacent to and on the inlet side of the meters.

4.2.4.2 In the case of a single meter installation utilizing an LP-Gas container, the container service valve shall be permitted to be used in lieu of the shutoff valve or cock.

4.2.4.3 All gas meter installations shall be provided with test tees located adjacent to and on the outlet side of the meters.

4.3 Multiple Manufactured Home Site Fuel Distribution and Supply Systems. *(See also Section 4.1, 4.3.11, Section 4.4, and 4.4.5.)*

4.3.1* Manufactured Home Community Natural Gas Distribution Systems. All underground metallic fuel piping systems shall comply with the cathodic protection requirements of 49 CFR 191 and 192.

4.3.2 Manufactured Home Community LP-Gas Supply Systems.

4.3.2.1 Where ten or more customers are served by one LP-Gas supply system, the installation of the gas supply system shall be in accordance with 49 CFR 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards."

4.3.2.2 Other types of liquefied petroleum gas supply systems and the storage and handling of LP-Gas shall be in accordance with NFPA 58, *Liquefied Petroleum Gas Code. (See also 4.3.8.)*

4.3.3 Installation of Cathodic Protection Systems. Where required by 49 CFR 191 and 192, cathodic protection shall be installed for corrosion control of buried or submerged metallic gas piping. *(See also 4.3.6.1 and 4.3.6.2.)*

4.3.4 Required Gas Supply.

4.3.4.1 The minimum hourly volume of gas required at each manufactured home site outlet or any section of the manufactured home community gas piping system shall be calculated as shown in Table 4.3.4.1.

4.3.4.2 In extreme climate areas, additional capacities other than those in Table 4.3.4.1 shall be considered.

4.3.5 Gas Pipe Sizing and Pressure.

4.3.5.1 The size of each section of a gas piping system shall be determined in accordance with NFPA 54, *National Fuel Gas Code*, or by other standard engineering methods acceptable to the authority having jurisdiction.

4.3.5.2 Where all connected appliances are operated at their rated capacity, the gas supply pressure shall be not less than 1743 Pa (7 in. water column). The gas supply pressure shall not exceed 3486 Pa (14 in. water column).

FAIR USE

Table 4.3.4.1 Demand Factors for Use in Calculating Gas Piping Systems in Manufactured Home Communities

No. of Manufactured Home Sites	Btu/hr per Manufactured Home Site
1	125,000
2	117,000
3	104,000
4	96,000
5	92,000
6	87,000
7	83,000
8	81,000
9	79,000
10	77,000
11–20	66,000
21–30	62,000
31–40	58,000
41–60	55,000
Over 60	50,000

4.3.6 Gas Piping Materials.

4.3.6.1 Metal.

4.3.6.1.1 Metal gas pipe shall be standard weight wrought iron or steel (galvanized or black), yellow brass containing not more than 75 percent copper, or internally tinned or treated copper of iron pipe size.

4.3.6.1.2 Galvanizing shall not be considered protection against corrosion.

4.3.6.1.3 Seamless copper or steel tubing shall be permitted to be used with gases not corrosive to such material.

4.3.6.1.4 Steel tubing shall comply with ASTM A 539, *Standard Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines*, or ASTM A 254, *Standard Specification for Copper Brazed Steel Tubing*.

4.3.6.1.5 Copper tubing shall comply with ASTM B 88, *Specification for Seamless Copper Water Tube* (Type K or Type L), or ASTM B 280, *Specification for Seamless Copper Tubing for Air Conditioning and Refrigeration Field Service*.

4.3.6.1.6 Copper tubing (unless tin-lined) shall not be used if the gas contains more than an average of 0.7 mg of hydrogen sulfide per 100 L of gas (0.3 grains/100 scf).

4.3.6.2 Protection Coatings for Metal Gas Piping.

4.3.6.2.1 All buried or submerged metallic gas piping shall be protected from corrosion by approved coatings or wrapping materials.

4.3.6.2.2 All gas pipe protective coatings shall be approved types, shall be machine applied, and shall conform to recognized standards.

4.3.6.2.3 Field wrapping shall provide equivalent protection and is restricted to those short sections and fittings that are necessarily stripped for threading or welding.

4.3.6.2.4 Risers shall be coated or wrapped to a point at least 152 mm (6 in.) above ground.

4.3.6.3 Plastic. Plastic piping shall only be used underground and shall meet the requirements of ASTM D 2513, *Thermoplastic Gas Pressure Pipe, Tubing, and Fittings*, or ASTM D 2517, *Reinforced Epoxy Resin Gas Pressure Pipe and Fittings*, as well as the design pressure and design limitations of 49 CFR 192.123, and shall otherwise conform to the installation requirements thereof.

4.3.7 Gas Piping Installations.

4.3.7.1 Minimum Burial Below Ground Level and Clearances. All gas piping installed below ground level shall have a minimum earth cover of 457 mm (18 in.) and shall be installed with at least 305 mm (12 in.) of clearance in any direction from any other underground utility system.

4.3.7.2 Metallic Gas Piping.

4.3.7.2.1 All metallic gas piping systems shall be installed in accordance with approved plans and specifications, including provisions for cathodic protection.

4.3.7.2.2 Each cathodic protection system shall be designed and installed to conform to the provisions of 49 CFR 192.

4.3.7.2.3 Where the cathodic protection system is designed to protect only the gas piping system, the gas piping system shall be electrically isolated from all other underground metallic systems or installations.

4.3.7.2.4 Where only the gas piping system is cathodically protected against corrosion, a dielectric fitting shall be used in the manufactured home gas connection to insulate the manufactured home from the underground gas piping system.

4.3.7.2.5 Where a cathodic protection system is designed to provide all underground metallic systems and installations with protection against corrosion, all such systems and installations shall be electrically bonded together and protected as a whole.

4.3.7.3 Plastic Gas Piping.

4.3.7.3.1 Plastic gas piping shall only be used underground and shall be installed with an electrically conductive wire for locating the pipe.

4.3.7.3.2 The wire used to locate the plastic pipe shall be copper, not smaller in size than No. 18 AWG, with insulation approved for direct burial.

4.3.7.3.3 Every portion of a plastic gas piping system consisting of metallic pipe shall be cathodically protected against corrosion.

4.3.7.4 Gas Piping System Shutoff Valve. An accessible and identifiable shutoff valve controlling the flow of gas to the entire manufactured home community gas piping system shall be installed near the point of connection to the service piping or to the supply connection of an LP-Gas container.

4.3.8* LP-Gas Equipment. LP-Gas equipment shall be installed in accordance with the applicable provisions of NFPA 58, *Liquefied Petroleum Gas Code*.

4.3.9 Oil Supply. The following three methods of supplying oil to an individual manufactured home site shall be permitted:

(1) Supply from an outside underground tank *(see 4.4.6)*
(2) Supply from a centralized oil distribution system designed and installed in accordance with accepted engineering practices and in compliance with NFPA 31, *Standard for the Installation of Oil-Burning Equipment*
(3) Supply from an outside aboveground tank *(see 4.4.6)*

4.3.10* Minimum Oil Supply Tank Size. Oil supply tanks shall have a minimum capacity equal to 20 percent of the average annual oil consumption.

4.3.11 Oil Supply Connections — General.

4.3.11.1 Oil supply connections at manufactured home sites, where provided from a centralized oil distribution system, shall be located and arranged to permit attachment in a worklike manner to a manufactured home utilizing the stand.

4.3.11.2 The installation of such facilities shall meet the provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, and particularly Section 5.8 thereof.

4.4 Fuel Supply Systems Installation.

4.4.1* Flexible Gas Connector. Except for manufactured homes located on an all-weather wood, concrete, or concrete block foundation system or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code, each gas supply connector shall be listed for outside manufactured home use, shall be not more than 1.83 m (6 ft) in length, and shall have a capacity rating to supply the connected load.

4.4.2 Use of Approved Pipe and Fittings of Extension. Where it is necessary to extend the manufactured home inlet to permit connection of the 1.83-m (6-ft) listed connector to the site gas outlet, the extension shall be of approved materials of the same size as the manufactured home inlet and shall be adequately supported at no more than 1.22-m (4-ft) intervals to the manufactured home.

4.4.3* Mechanical Protection. All gas outlet risers, regulators, meters, valves, or other exposed equipment shall be protected against accidental damage.

4.4.4 Special Rules on Atmospherically Controlled Regulators.

4.4.4.1 Atmospherically controlled regulators shall be installed in such a manner that moisture cannot enter the regulator vent and accumulate above the diaphragm.

4.4.4.2 Where the regulator vent is obstructed due to snow and icing conditions, shields, hoods, or other suitable devices shall be provided to guard against closing of the vent opening.

4.4.5 Fuel Gas Piping Test. The manufactured home fuel gas piping system shall be tested only with air before it is connected to the gas supply. The manufactured home gas piping system shall be subjected to a pressure test with all appliance shutoff valves in their closed positions.

FAIR USE

4.4.5.1 Fuel gas piping shall comply with the following.

4.4.5.1.1 The fuel gas piping test shall consist of air pressure at 2490 Pa to 3486 Pa (not less than 10 in. water column or more than 14 in. water column).

4.4.5.1.2 The system shall be isolated from the air pressure source and shall maintain this pressure for not less than 10 minutes without perceptible leakage.

4.4.5.1.3 Upon satisfactory completion of the test, the appliance valves shall be opened and the gas appliance connectors shall be tested with soapy water or bubble solution while under the pressure remaining in the piping system.

4.4.5.1.4 Solutions used for testing for leakage shall not contain corrosive chemicals.

4.4.5.1.5 Pressure shall be measured with either a manometer, slope gauge, or gauge that is calibrated in either water mm (in.) or kPa (psi) with increments of either 2.5 mm (1⁄10 in.) or 0.6 kPa gauge (1⁄10 psi), as applicable.

4.4.5.1.6 Upon satisfactory completion of the test, the manufactured home gas supply connector shall be installed and the connections shall be tested with soapy water or bubble solution.

4.4.5.2 The following warning shall be supplied to the installer.

> **WARNING:** Do not overpressurize the fuel gas piping system. Damage to valves, regulators, and appliances can occur due to pressurization beyond the maximums specified.

4.4.5.3 Gas appliance vents shall be visually inspected to ensure that they have not been dislodged in transit and are connected securely to the appliance.

4.4.6 Oil Tanks. Oil tanks' capacities shall comply with the following:

(1) No more than one 2500-L (660-gal) tank or two tanks with aggregate capacity of 2500 L (660 gal) or less shall be connected to one oil-burning appliance.
(2) Two supply tanks, where used, shall be cross-connected and provided with a single fill and single vent, as described in NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, and shall be on a common slab and rigidly secured, one to the other.
(3) Tanks having a capacity of 2500 L (660 gal) or less shall be securely supported by rigid, noncombustible supports to prevent settling, sliding, or lifting.

4.4.6.1* Oil supply tanks shall be installed in accordance with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment.*

4.4.6.2 Tank Construction.

4.4.6.2.1 A tank with a capacity no larger than 230 L (60 gal) shall be permitted to be a DOT-5 shipping container (drum), and so marked, or a tank meeting the provisions of UL 80, *Steel Inside Tank for Oil Burner Fuel.*

4.4.6.2.2 Tanks other than DOT-5 shipping containers having a capacity of not more than 2500 L (660 gal) shall meet the provisions of UL 80, *Steel Inside Tank for Oil Burner Fuel.* Pressure tanks shall be built in accordance with Section VIII, "Pressure Vessels," of the ASME *Boiler and Pressure Vessel Code.*

4.4.6.3 Tanks, as described in 4.4.6 and 4.4.6.2, that are adjacent to buildings shall be located not less than 3.05 m (10 ft) from a property line that is permitted to be built upon.

4.4.6.4 Tanks with a capacity no larger than 2500 L (660 gal) shall be equipped with an open vent no smaller than 38-mm (1.5-in.) iron pipe size; tanks with a 1900-L (500-gal) or less capacity shall have a vent of 32-mm (1.25-in.) iron pipe size.

4.4.6.5* Tanks shall be provided with a means of determining the liquid level.

4.4.6.6 The fill opening shall be a size and in a location that permits filling without spillage.

4.5 Manufactured Home Accessory Building Fuel Supply Systems.

4.5.1 Fuel gas supply systems installed in a manufactured home accessory building or structure shall comply with the applicable provisions of NFPA 54, *National Fuel Gas Code*, and NFPA 58, *Liquefied Petroleum Gas Code*.

4.5.2 Fuel oil supply systems shall comply with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

4.6 Community Building Fuel Supply Systems in Manufactured Home Communities.

4.6.1 Fuel Gas Piping and Equipment Installations.

4.6.1.1 Fuel gas piping and equipment installed within a permanent building in a manufactured home community shall comply with nationally recognized appliance and fuel gas piping codes and standards adopted by the authority having jurisdiction.

4.6.1.2 Where the state or other political subdivision does not assume jurisdiction, such fuel gas piping and equipment installations shall be designed and installed in accordance with the applicable provisions of NFPA 54, *National Fuel Gas Code*, or NFPA 58, *Liquefied Petroleum Gas Code*.

4.6.2 Oil Supply Systems.

4.6.2.1 Oil-burning equipment and installation within a manufactured home community shall be designed and constructed in accordance with the applicable codes and standards adopted by the authority having jurisdiction.

4.6.2.2 Where the state or other political subdivision does not assume jurisdiction, such installations shall be designed and constructed in accordance with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

4.6.3 Oil-Burning Equipment and Installation.

4.6.3.1 Oil-burning equipment and installation within a building constructed in a manufactured home community in accordance with the local building code or a nationally recognized building code shall comply with nationally recognized codes and standards adopted by the authority having jurisdiction.

4.6.3.2 Where the state or other political subdivision does not assume jurisdiction, such oil-burning equipment and installations shall be designed and installed in accordance with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

FAIR USE

Chapter 5 Electrical System

5.1 Manufactured Home Site and Community Electrical Equipment and Installations. Sites and communities provided with electrical service shall have all electrical equipment and installations designed, constructed, and maintained in accordance with the applicable provisions of NFPA 70, *National Electrical Code*®.

Chapter 6 Life Safety and Fire Safety

6.1 General. Responsibility for life safety and fire safety within manufactured home communities shall be that of the owners and operators of the community.

6.1.1 Site Plan.

6.1.1.1 Arrangement of manufactured homes and accessory buildings or structures on the site shall not restrict reasonable access to the site by emergency personnel.

6.1.1.2 Each community operator shall maintain a community site plan for review by agencies responsible for emergency services.

6.1.1.3 The site plan shall include, but not be limited to, the following information:

(1) Street names
(2) Site separation lines
(3) Site numbers
(4) Water supplies for fire protection personnel
(5) Fire alarms
(6) Utility disconnects

6.1.2 Each street name in the manufactured home community shall be clearly marked with signs, and each manufactured home site shall be marked for identification in a uniform manner that is clearly visible from the street serving the site.

6.2 Manufactured Home Site Fire Safety Requirements.

6.2.1 Fire Safety Separation Requirements.

6.2.1.1 No portion of a manufactured home, excluding the tongue, shall be located closer than 3 m (10 ft) side to side, 2.4 m (8 ft) end to side, or 1.8 m (6 ft) end to end horizontally from any other manufactured home or community building unless the exposed composite walls and roof of either structure are without openings and constructed of materials that will provide a 1-hour fire resistance rating or the structures are separated by a 1-hour fire-rated barrier. *(See 6.4.1.)*

6.2.1.2 Vertical Positioning of Manufactured Homes. Manufactured homes shall not be positioned vertically, stacked with one over the other, in whole or in part, unless the structure is designed and approved for such installation and permitted by the authority having jurisdiction.

6.2.2* Marking of Underground Utility Lines.

6.2.2.1 The location of underground electrical cables, gas piping, water piping, and sewer lines that are buried within 1.2 m (4 ft) of the perimeter of the site's largest planned manufactured home shall be indicated by an aboveground sign(s) or underground marker tapes identifying the proximity of the lines.

6.2.2.2 A plot plan showing the "as built" location of underground utility lines shall be available for installations in multiple-site facilities.

6.2.3 Manufactured Home Installations.

6.2.3.1 Installation of all manufactured homes, including the installation of the support system and the connection of structural, electrical, mechanical, and plumbing systems to the site utilities or between sections in the case of multiple-section homes, shall be performed in accordance with printed installation instructions provided by the manufacturer of the home.

6.2.3.2 For installations where printed instructions by the manufacturer are not available, the installation shall be performed in a manner that satisfies the intent of this standard as determined by the authority having jurisdiction.

6.2.3.3 The design of support systems shall consider the climatic and geological conditions present at the manufactured home site.

6.2.3.4 All manufactured home utility services shall be connected to the supply sources only with approved materials.

6.2.3.5 All manufactured homes, accessory buildings, structures, and community buildings shall be located and maintained in such a manner that required egress windows or doors are not blocked.

6.3 Manufactured Home Community Buildings.

6.3.1 Construction.

6.3.1.1 Every community building shall be designed and constructed in accordance with the applicable provisions of local building codes.

6.3.1.2 Materials, fixtures, devices, fittings, and the installation of such shall conform to nationally recognized standards.

6.3.2 Incinerators and Rubbish Burning.

6.3.2.1 The burning of rubbish within a community shall not be permitted unless specifically permitted by the authority having jurisdiction.

6.3.2.2 Incinerators, where permitted by the authority having jurisdiction, shall be constructed in accordance with NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*.

6.3.2.3 Incinerators, where permitted by the authority having jurisdiction, shall meet the applicable standards of the environmental protection agency having jurisdiction.

6.3.3 Outdoor Hazards. All areas and individual sites within the manufactured home community shall be maintained so as to be free of dry brush, leaves, weeds, and other debris that could contribute to the spread of fire within the site or community.

6.3.4 Fire Detection and Alarm Systems.

6.3.4.1* Fire detection and alarm systems in community buildings shall be installed in accordance with *NFPA 72*®, *National Fire Alarm Code*®.

6.3.4.2 Where provided, street fire alarm services for the community shall be in accordance with NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*.

6.3.4.3 Where street fire alarm services are not provided, alarm procedures shall be posted as required by the local fire service.

6.3.5 Water Supplies for Fire Protection — Minimum Requirements.

6.3.5.1 Water supplies for fire department operations without municipal water supply shall be in accordance with NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*.

6.3.5.2 Fire Hydrants.

6.3.5.2.1 Where provided, hydrants shall be located along community streets or public ways within 152.4 m (500 ft) of all homes and buildings and installed in accordance with NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*.

6.3.5.2.2 The Insurance Service Office's Fire Suppression Rating Schedule, Table 340, "Calculation of Needed Fire Flow," water flow rate table shall be used to determine the minimum water flow required.

6.3.6 Manufactured Home and Community Fire Safety Requirements.

6.3.6.1 The space under manufactured homes and accessory buildings and structures shall not be used for the storage of combustible materials or for the storage or placement therein of flammable liquids, gases, or liquid or gas fuel-powered equipment. *(See Annex B.)*

6.3.6.2 The following emergency information shall be printed and posted in conspicuous places in the manufactured home community:

(1) Telephone numbers for the following:
    (a) Fire department
    (b) Police department or sheriff's office
    (c) Community office
    (d) Person responsible for operation and maintenance of the manufactured home community
(2) Locations of the following:
    (a) Nearest fire alarm box, where available
    (b) Nearest public telephone
    (c) Address of the manufactured home community

6.3.6.3* Portable fire extinguishers, where required or installed, shall be of the type and size required by NFPA 10, *Standard for Portable Fire Extinguishers*.

6.3.6.4 Community Buildings.

6.3.6.4.1 The provisions of NFPA *101*®, *Life Safety Code*®, regarding construction, protection, and occupancy features of community buildings shall be followed, as applicable, to minimize danger to life from fire, smoke, or panic.

6.3.6.4.2 Special attention shall be given to the number, size, and arrangement of exit facilities in community buildings used as places of public assembly.

6.3.6.5 Community buildings shall be provided with listed portable fire extinguishers in accordance with the applicable provisions of NFPA 10, *Standard for Portable Fire Extinguishers*.

6.4 Accessory Building or Structure Fire Safety Requirements.

6.4.1 Setback Requirements.

6.4.1.1 Accessory buildings or structures shall be permitted to be located immediately adjacent to a site line when constructed entirely of materials that do not support combustion and provided that such buildings or structures are not less than 0.9 m (3 ft) from an accessory building or structure on an adjacent site.

6.4.1.2 An accessory building or structure constructed of combustible materials shall be located no closer than 1.5 m (5 ft) from the site line of an adjoining site.

6.4.2 Exits.

6.4.2.1 Every habitable room in an accessory building or structure shall have access to at least one exterior opening suitable for exiting directly to the outside without passing through the manufactured home.

FAIR USE

6.4.2.2 Where a building or structure encloses two doors of the manufactured home or an emergency exit window, an additional exterior door shall be installed.

6.4.2.3 The exterior door shall not be less than 0.7 m (28 in.) in width and 1.9 m (6 ft 2 in.) in height.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A.3.3.9 Manufactured Home Accessory Building or Structure. Examples include awnings, cabanas, garages, ramadas, storage structures, carports, fences, windbreaks, or porches.

A.4.1.1 Gas piping systems (e.g., natural gas, manufactured gas, LP-Gas in the vapor phase, liquefied petroleum gas–air mixtures, or mixtures of these gases) that are owned, operated, and maintained by a public utility are exempt from the provisions of this standard but are required to conform to 49 CFR 192. *(See 4.3.1.)*

A.4.2.3.2 Electrical service equipment for a manufactured home should not be considered a source of ignition where it is not enclosed in the same compartment with a gas meter.

A.4.3.1 The Natural Gas Pipeline Safety Act of 1979 requires that all gas distribution system operators adhere to the referenced title. Any master-metered gas distribution system that supplies a manufactured home community with gas and that, in turn, distributes the gas to the ultimate users (i.e., tenants) is defined as a gas distribution system within the context of the federal regulations. Owners of master-metered housing projects or manufactured home communities accordingly are defined as *gas distribution system operators.*

Title 49 CFR 191 provides requirements for the reporting of gas leaks that are not intended by the operator. The American Society of Mechanical Engineers publishes the ASME B 31.8, *Guide for Gas Transmission and Distribution Piping Systems*, which contains 49 CFR 192, along with other useful technical information.

The *Handbook on Natural Gas Pipeline Safety in Residential Areas Served by Master Meters* was developed under contract for the U.S. Department of Housing and Urban Development (HUD-PDR-124) and is specifically aimed at providing "a timely and comprehensive safety guide for architects and engineers involved in the planning and design phases of multifamily projects and manufactured home parks."

A.4.3.8 NFPA 58, *Liquefied Petroleum Gas Code*, includes provisions on the following:

(1) Location of containers
(2) Installation of containers
(3) Installation of container appurtenances
(4) Regulator installations
(5) Piping system service limitations
(6) Installation of pipe, tubing, pipe and tubing fittings, valves, and hose
(7) Hydrostatic relief valve installation

A.4.3.10 Two hundred-thirty-L (60-gal) ICC-5 shipping containers or drums are not recommended, except for areas with less than 1800 degree-days.

A.4.4.1 A flexible gas connector should be installed to provide some slack.

A.4.4.3 Such protection can consist of posts, fencing, or other permanent barriers.

A.4.4.6.1 The provisions in 4.4.6.1 do not apply to centralized oil distribution systems *(see 4.3.11 and 4.6.2).* See also NFPA 31, *Standard for the Installation of Oil-Burning Equipment.* Chapter 4 of NFPA 31 includes provisions on the design and construction of tanks, installation of underground tanks, outside aboveground tanks no larger than 2500 L (660 gal), and location with respect to adjacent buildings and adjoining property lines.

A.4.4.6.5 Additional information can be found in Section 5.6 of NFPA 31, *Standard for the Installation of Oil-Burning Equipment.*

A.6.2.2 This requirement is intended to prevent possible damage to underground electrical cables, gas and water piping, and sewer lines caused by the use of ground anchors, the installation of skirting (underfloor enclosures), plantings, foundations for steps at access doors, and so forth.

A.6.3.4.1 See *NFPA 72®*, *National Fire Alarm Code®*, for other suitable types of fire protection signaling systems.

A.6.3.6.3 It is recommended that each building owner provide a listed portable fire extinguisher that is suitable for handling incipient fire in the building. A listed extinguisher labeled as suitable for Class A, Class B, and Class C fires (i.e., multipurpose dry chemical type) is recommended. A 19-mm (0.75-in.) nominal valved water outlet designed for connecting a 19-mm (0.75-in.) nominal female swivel hose connection for fire suppression use is recommended on each site where practical and if protected against freezing.

Annex B Manufactured Home Community Action for Fire Safety

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Purpose. The purpose of this annex is to give fire safety guidance for the manufactured home community.

B.2 Responsibilities of the Manufactured Home Community Management. The manufactured home community management's objective should be to give information to the community's manufactured home owners/occupants and to encourage their cooperation in the protection of life and property from fire. The community management also should be responsible for instructing staff in the use of fire protection equipment and defining specific duties in the event of fire. The community management should prepare the type of material detailed in B.2.1 through B.2.5 with the cooperation of the responsible local fire protection authority.

B.2.1 How to Report a Fire. Specific instructions should be given to owners on how to report a fire, providing the following information:

(1) Name of manufactured home community
(2) Location of community
(3) Identification of the manufactured home site involved

B.2.2 Utility Services. The connecting and disconnecting of water, fuel, and electrical services should be performed only by authorized persons, as determined by community management. Should these services be interrupted, telephone or notify (*insert name*) for water, (*insert name*) for fuel, and (*insert name*) for electrical.

B.2.3 Fire-Fighting Equipment. Portable fire extinguishers and/or other fire-fighting equipment are maintained on the premises. The nearest emergency equipment is located (*insert location*).

Full directions should be given as to the equipment's location.

B.2.4 Laundry Rooms. Clothes dryers should be cleaned periodically by management to remove combustible material, including lint. A sign should be located in a conspicuous place warning of the fire hazard in placing plastics in dryers and warning against the use of flammable liquids as cleaning agents.

B.2.5 Recreation Buildings. Management should instruct staff and community residents in the proper use of appliances located in community buildings and provide a list of these instructions near each appliance.

Annex C Responsibilities of the Manufactured Home Resident

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 Responsibilities. The manufactured home resident should comply with all applicable requirements of this standard and should maintain his or her manufactured home site, its facilities, and its equipment in good repair and in a fire-safe condition.

C.1.1 Procedures in Case of Fire. In case of a fire in a manufactured home, the home owner should do the following in the order listed:

(1) Get all occupants out of the home.
(2) Call the fire department or sound the alarm. (The important thing is to get professional fire fighters to the fire as promptly as possible.)

C.1.2 Maintenance and Testing of Manufactured Home Smoke Alarms. The manufactured home resident should maintain and routinely test smoke alarms at least once a month following the procedures recommended by the smoke alarm manufacturer. Smoke alarms should be replaced when they fail to respond to tests. Smoke alarms should not remain in service longer than 10 years from the date of installation.

C.1.3 Family Escape Plan. To assist in the escape from a manufactured home in the event of fire conditions, the home resident should develop and practice a family escape plan.

C.1.4 Fire Conditions. Home owners/occupants should assist the management in keeping the area free of fire hazards by notifying the management when unsafe conditions exist. Constant vigilance is necessary to maintain the premises free from fire at all times.

C.1.5 LP-Gas Containers. In addition to mounted LP-Gas containers, a home can have two additional vessels installed on the lot. The home can be served by either the vehicle containers or by the vessels on the lot, but not by both at the same time. LP-Gas containers should be installed in accordance with the applicable provisions of NFPA 58, *Liquefied Petroleum Gas Code.*

C.1.6 Charging of Vessels. LP-Gas vessels should be charged in accordance with the applicable provisions of NFPA 58, *Liquefied Petroleum Gas Code.*

C.1.7 Location of Vessels. LP-Gas vessels should not be stored or located inside of or beneath any storage cabinet, cabana, awning, carport, ramada, home, or any other structure in a community.

C.1.8 Empty LP-Gas Containers. Owners/occupants should not place empty LP-Gas containers under their homes. Empty containers should be left in place if there is more than one container. If the manufactured home's LP-Gas supply is limited to one container and a replacement has been secured, any empty fuel container should be stored in the area designated for such storage.

C.1.9 Home Inspections. A manufactured home owner should notify the fire department if the owner wishes to have a voluntary home inspection performed.

C.1.10 Traffic Regulations. Operators of vehicles should observe the posted signs and keep all designated fire lanes and access to fire hydrants open at all times.

C.1.11 Marking. Each home site should be marked for identification. Such a marker should be easily readable from the street servicing the site.

C.2 Periodic Inspections. Periodic inspections of the enclosed space are recommended to ensure that all utility and other connections are secure and that no fire hazards exist.

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Annex D Informational References

D.1 Referenced Publications. The following documents or portions thereof are referenced within this standard for informational purposes only and are thus not part of the requirements of this document unless also listed in Chapter 2.

D.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, 2001 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2001 edition.

NFPA 72®, *National Fire Alarm Code®*, 2002 edition.

D.1.2 Other Publications.

D.1.2.1 ASME Publication. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

ASME B 31.8, *Guide for Gas Transmission and Distribution Piping Systems*, 1995.

D.1.2.2 U.S. Government Publications. U.S. Government Printing Office, Washington, DC 20402.

Title 49, *Code of Federal Regulations*, Parts 100–199.

Handbook on Natural Gas Pipeline Safety in Residential Areas Served by Master Meters, 1975.

D.2 Informational References. (Reserved)

D.3 References for Extracts. (Reserved)

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Sequence of Events Leading to Publication of an NFPA Committee Document

Call goes out for proposals to amend existing document or for recommendations on new document.

▼

Committee meets to act on proposals, to develop its own proposals, and to prepare its report.

▼

Committee votes on proposals by letter ballot. If two-thirds approve, report goes forward. Lacking two-thirds approval, report returns to committee.

▼

Report — *Report on Proposals* (ROP) — is published for public review and comment.

▼

Committee meets to act on each public comment received.

▼

Committee votes on comments by letter ballot. If two-thirds approve, supplementary report goes forward. Lacking two-thirds approval, supplementary report returns to committee.

▼

Supplementary report — *Report on Comments* (ROC) — is published for public review.

▼

NFPA membership meets (Annual or Fall Meeting) and acts on committee report (ROP or ROC).

▼

Committee votes on any amendments to report approved at NFPA Annual or Fall Meeting.

▼

Appeals to Standards Council on Association action must be filed within 20 days of the NFPA Annual or Fall Meeting.

▼

Standards Council decides, based on all evidence, whether or not to issue standard or to take other action, including upholding any appeals.

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Committee Membership Classifications

The following classifications apply to Technical Committee members and represent their principal interest in the activity of the committee.

M	*Manufacturer:* A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
U	*User:* A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
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SE	*Special Expert:* A person not representing any of the previous classifications, but who has a special expertise in the scope of the standard or portion thereof.

NOTES:

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2. A representative includes an employee.
3. While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of members or unique interests need representation in order to foster the best possible committee deliberations on any project. In this connection, the Standards Council may make such appointments as it seems appropriate in the public interest, such as the classification of “Utilities” in the National Electrical Code Committee.
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Please indicate organization represented (if any) Fire Marshals Assn. of North America

1. a) NFPA Document Title National Fire Alarm Code

b) NFPA No. & Edition NFPA 72, 2002 ed. **c) Section/Paragraph** 4.4.7.1.1

2. Proposal Recommends: *(check one)* ☐ **new text** ☐ **revised text** ☒ **deleted text**

3. Proposal. *(Include proposed new or revised wording, or identification of wording to be deleted.)* Note: Proposed text should be in legislative format, that is, use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~). Delete exception.

4. Statement of Problem and Substantiation for Proposal. Note: State the problem that will be resolved by your recommendation. Give the specific reason for your proposal including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication. A properly installed and maintained system should be free of ground faults. The occurrence of one or more ground faults should be required to cause a "trouble" signal because it indicates a condition that could contribute to future malfunction of the system. Ground fault protection has been widely available on these systems for years and its cost is negligible. Requiring it on all systems will promote better installations, maintenance and reliability.

5. ☒ **This Proposal is Original Material.** Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.

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4. Statement of Problem and Substantiation for Proposal. Note: State the problem that will be resolved by your recommendation. Give the specific reason for your proposal including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication. ____________

5. ☐ **This Proposal is Original Material.** Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.

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